

GRIDIRON

RADIAL

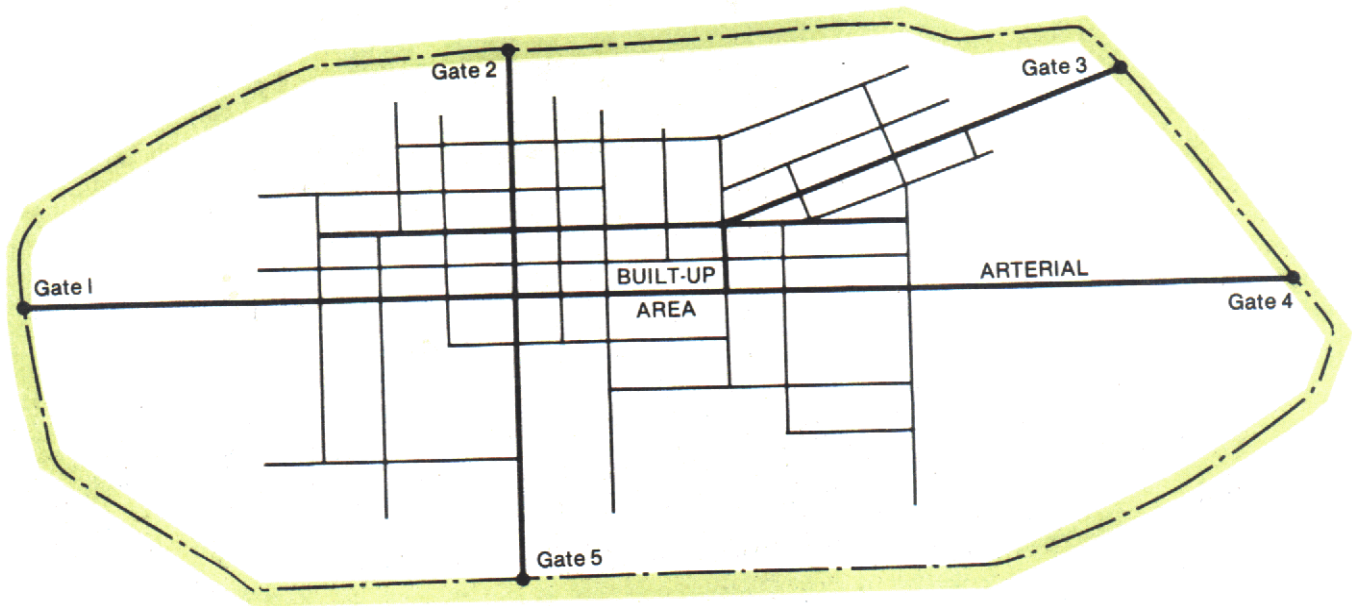
**GOOD STREET SYSTEMS** follow one of two basic patterns, or a combination of the two. One is the **GRIDIRON** pattern; the other, a **RADIAL-CIRCUMFERENTIAL** pattern.

Most military installations show a gridiron pattern, with traffic corridors extending outward from the central area. The headquarters and/or administrative units remain the major traffic generators. Any major shopping facilities are usually located adjacent to an arterial and, compared with administrative units, generate an insignificant amount of peak-hour traffic.

**GRIDIRON PATTERNS  
COMMONLY  
FORM STREET SYSTEMS**

## GRIDIRON

The **gridiron system**, resembling a checkerboard, is a series of streets located at approximate right angles to each other. These streets produce blocks that are either square or rectangular.



ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> <li>● Roads are easy to design and lay out.</li> <li>● Roads can be extended indefinitely.</li> <li>● Straight roads generally simplify the design of utilities.</li> <li>● Rectangular blocks created by the street system are easy to subdivide.</li> <li>● The street system is easily understood, named, and numbered.</li> </ul>	<ul style="list-style-type: none"> <li>● The system does not adapt well to irregular topography.</li> <li>● Travel between destinations located diagonally opposite each other is inconvenient and indirect.</li> <li>● Most of the streets must be designed for high-volume traffic and have heavy-duty pavement, because every street is a through street and therefore capable of developing into a major thoroughfare.</li> <li>● Shifting traffic and general dispersion of through traffic can spoil the entire area for best residential use, with little compensation in convenience or directness.</li> </ul>

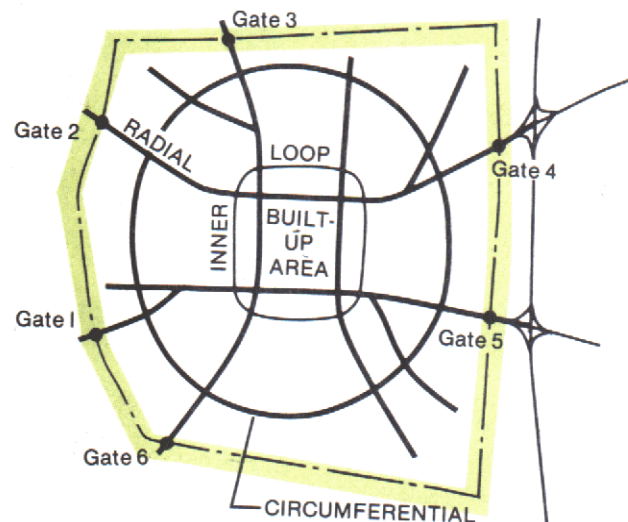


## RADIAL

**THE RADIAL-CIRCUMFERENTIAL SYSTEM** consists of a series of major streets radiating from the central, or built-up, area of an installation. These radials are supplemented by a series of circumferential streets that encircle the built-up area. With such a street system, it is very important to have an inner loop around the built-up area — because, if all radial streets were to cross at one point in the built-up area, intolerable congestion would result. With an inner loop, traffic can flow on the radials toward the built-up area, then follow the loop around the built-up area to a point opposite its destination; it can then turn into or toward its built-up area destination. Usually, the radials terminate at the inner loop, except one or two in each major direction cross the built-up area. The built-up area usually is a gridiron pattern, which best serves built-up area traffic.

**RADIAL STREETS** provide direct travel between the outskirts and the built-up area of an installation. These routes adapt easily to topography and, therefore, usually are established quite naturally except where prevented by deliberate planning.

**CIRCUMFERENTIAL STREETS**, on the other hand, permit travel from one point to another in the outskirts of the installation without going through the built-up area. The alignment of circumferential streets, like radial streets, usually is either irregular or straight, not circular as the term implies.



ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> <li>● Travel between any two points on an installation usually can be more direct.</li> <li>● The system design permits good adaptation of the streets to the topography.</li> <li>● A major street can be easily distinguished from a minor street.</li> <li>● Each street is designed for one particular purpose, which leads to traffic stability.</li> <li>● Cost savings in street construction and maintenance programs can result, because this system requires less actual street mileage than the gridiron requires.</li> </ul>	<ul style="list-style-type: none"> <li>● Streets are more difficult to layout than in the gridiron system.</li> <li>● Street layout leaves irregularly shaped parcels of land that may be hard to subdivide.</li> <li>● Road layout complicates utility installations.</li> <li>● Development of circumferential streets, which relieve congestion in the built-up area, is often neglected.</li> </ul>

### ROAD SYSTEM OBJECTIVES

- Concentrate most of the traffic on a few well-designed arterial roads.
- Locate arterial roads to serve the built-up area.
- Supply an adequate number of nonarterial streets.
- Provide direct travel from entrance gates to work areas.
- Insure compatible related land use.

### REFERENCES

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